

Abstract

The present invention relates to a method and apparatus of precise first-path detection in CDMA mobile communications systems, comprising the steps of: a. calculating the noise threshold for the first-path detection according to the multi-path profile; b. judging whether there is a maximum point exceeding the noise threshold in the multi-path profile, if yes, carrying out side-lobe suppression at this maximum point and obtaining the candidate first path; otherwise, setting the flag of no first path existing, and exiting the entire process of first-path detection; c. judging according to the location of the candidate first path whether the first path is ambiguous, if yes, carrying out correction of first-path ambiguity, obtaining the corrected location of final first path, and exiting the entire first-path detection process; otherwise, outputting the location of candidate first path as the location of final first path. The apparatus in accordance with this invention comprises at least a module for noise threshold calculation, a module for side-lobe suppression, and a module for first-path ambiguity detection and correction.